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SECURITY INFORMATION

# INFORMATION REPORT

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SUPPLEMENT TO REPORT NO.



25X

THIS IS UNEVALUATED INFORMATION

1. This description of machine tools being manufactured in Poland is made according to kinds of machines with indication of factories and towns where they are built. Because all factories subordinated to the Central Administration of Machine Equipment Industry have the same name, State Machine Equipment Factory 25X1

25X1 the former names of factories still being in common use are stated in this description.

Lathes

2. The former Association of Polish Mechanicians from America, located in Poreba: All lathes manufactured here are the German Magdeburger Werkzeugmaschinen Fabrik type. The following five types of lathes are built here:

| Type | Maximum diameter of work turned |
|---|---|
| TR 45 | 450 mm. |
| TR 55 | 550 mm. |
| TR 70 | 700 mm. |
| TR 90 | 900 mm. |
| TR 100 | 1,000 mm. |

| | Spindle speed rate |
|---|---|
| TR 45 | 9.6 to 960 r.p.m. |
| TR 55 | 9.6 to 960 r.p.m. |
| TR 70 | 9.8 to 760 r.p.m. |
| TR 90 | 7.8 to 480 r.p.m. |
| TR 100 | 7.8 to 480 r.p.m. |

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Lathes TR 45 and TR 55 are of high-speed type, the weight is up to three t., the feed box gives 55 speed rates, 18 different spindle speeds. Types TR 70, TR 90, and TR 100 are for heavier work, the weight is from 5 t. to 12 t. respectively. Special equipment consists of : taper turning attachment, extended cross slide with rear tool post, and arrangement for cutting all kinds of threads.

A special heavy roll-turning lathe, type 3TAP, is built at the Poreba factory. The maximum diameter of turning is 1,000 m; length between centers is 4 to 5 m.; driving power is 40 HP, and the weight is 25 to 30 tons.

3. Zaklady Imienia Strzelczyka(former John Factory), located in Lodz produces high-speed lathes, type TSS-150. The height of the centers above the bed is 150 mm. and is made in three lengths between the centers: 600 mm., 800 mm., 1,000 mm. The spindle speed range is from 28 to 1,250 r.p.m.; range of feeds, from .02 to 4.48 mm/rev. All kinds of threads can be cut: metric, inch, module, diametral pitch, etc. by adding a corresponding number of change wheels.

4. The former Association of Polish Mechanicians from America, located in Pruszkow near Warsaw: The tool lathe is made in two types: 3TXE and 3TAG, patterned after the old German Kerger model. The height of the centers above the bed is 225 mm.; the length between centers is 1,000 to 1,500 mm. Type 3TXE is able to cut normal and abnormal threads. Type 3TAG is like 3TXE, but without lead screw.

5. The former Zieleniewski Factory, located in Dabrowa Gornicza (Q51/Y77) manufactures a rather primitive tool lathe. The height of the center is 175 mm; length between centers is 1,000 mm; the spindle speed is up to 1,200 r.p.m. The universal vertical lathe and boring mill is made in two types: type KN-8,which has an 800 mm. diameter table, 12 HP motor,and type KN-11, which has a 1,100 mm. diameter table and 20 HP motor. The speed of rotation of the table is from 5 to 155 r.p.m.; the rotation is fully hydraulically controlled.Both types are the German Nema-Neisse design. The only difference was that stageless drive (German) was replaced by a speed box giving 16 rates of speed. This was done as a result of a lack of proper driving chains in Poland.

6. The former Wispofana Factory, located in Poznan, manufactures a lathe with belt drive: the height of the centers is 210 mm.; length between centers is 1,000 and 1,500 mm.; the spindle speed is up to 1,500 r.p.m. The change of spindle speed is performed by means of worm and change pulleys. Only the longitudinal feed drive is automatic.

7. The former Raciborz Forge (Kuznia Raciborska), located in Raciborz, was destroyed during the war and later reconstructed. It has specialized in the production of special machine tools for manufacturing and re-machining worn axle unit wheels and wheel tires of rolling stock. Seven different types are manufactured here. They are mostly of the German Hagenscheidt design, improved and perfected by Polish engineers, mainly at Poreba. The weight of the machines varies from 15 to 55 tons, according to the type. The monthly output is about 50 machines. They have been exported to satellite countries, to the USSR, to India, and have been offered to South America.

   a. Wagon and tender wheel lathe, 1TCH, is used for machining mounted wagon or tender axle units with a maximum wheel flange diameter of 1,150 mm. This lathe has two headstocks with wide spindle speed range that enables the machining of wheels with new and worn tires. It has also four fully automatic slide rests. Hard alloy-tipped tools are applied. The weight is approximately 30 tons.

   b. Locomotive wheel lathe, type 3TCH, is used for machining mounted locomotive axle units with a maximum wheel flange diameter of 2,300 mm. It is similar in design to the lathe used in manufacturing wagon axle units, only larger. The weight is approximately 50 tons.

c. Universal wheel lathe is made in two sizes, type 1TCG with a maximum turning diameter of 1,200 mm., and type 2TCG with a maximum turning diameter of 1,400 mm. These machines are suitable for railway repair shops and for narrow-gauge rolling stock. They can also be used for turning bare wheels and tires. This kind of machine has one headstock and one tailstock. It is provided with two slide rests: one at the headstock end (for rough profiling and finish turning), and one at the tailstock end (for re-machining and polishing, or for rolling of journals). The weight is approximately 15 tons.

d. Lathe for mounted axle journals, type TBG, is a combined turning, polishing and rolling machine for re-machining outer journal ends of mounted wagon axle units, for polishing them by means of shaped rollers, for rolling journals, hub ends and journal flanges. The weight is approximately 15 tons.

e. Vertical lathe for turning wagon and tender wheel tires, type KC-10, has a maximum turning diameter of 1,000 mm. It has two tool heads: one, the right hand, for rough and finish turning of the inside diameter of tires, and another, the left hand, for machining the inclined recess to take the bare wheel and for cutting the grooves for the retention ring. The weight is approximately 20 tons.

f. Vertical lathe for turning locomotive wheel tires, type 25 KBE, has a maximum turning diameter of 2,300 mm. It is similar in design to the lathe used for wagon and tender wheel tires, only larger. The weight is approximately 35 tons.

g. Vertical lathe and boring mill is used for machining bare wheels and turning the inside diameter of hubs by means of an additional high speed spindle going through the center of the table. The universal type, 1KCE, has a table diameter of 2,500 mm. It has fully hydraulically operated rotary motion.

Drilling machines.

8. The J. Stalin Plant (former H. Cegielski), located in Poznan, manufactures radial drills made in three sizes, patterned after the German Raboma models: 40 mm. maximum diameter bored; 50 mm. maximum diameter bored; 80 mm. maximum diameter bored. The rates of drilling radius are 1 m., 1.5 m., 2.5 m., respectively.

9. The former Walden factory, located in Wroclaw, produces a drilling machine with 63 mm. maximum diameter bored. The machines have 12 spindle speeds, 9 speed rates of feed, and a table with cross motion.

10. The former John Factory, located in Lodz, produces a drilling machine , 40 mm. maximum diameter bored, made after the German Webo model. It has friction drive.

11. The former Bracia Lubert Factory, located in Warka (R52/L13), manufactures a bench drilling machine, 16 mm. maximum diameter bored.

Boring Machines

12. The former Zieleniewski Factory, located in Sosnowiec (Q 51/Y67), manufactures a combined boring and milling machine, made in three sizes:

| Type | Spindle Diameter |
|---|---|
| HWC-80 | 80 mm. |
| HWC-90 | 90 mm. |
| HWC-110 | 110 mm. |

These are similar to the American Niles design; the only difference is that the headstock is on the right side. The electric motor and feed boxes are in the headstock.

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Milling Machines

13. The J. Stalin Plant (former H. Cegielski), located in Poznan, manufactures a universal milling machine of FU type for making tools; it is made in two sizes: the table 180 by 1,200 mm. and the table 260 by 1,350 mm. The spindle speed ranges from 19 to 740 r.p.m. It is provided with an automatic feed and quick reverse in three directions. Special equipment consists of: a head for oblique milling, a universal dividing head and a circular table.

14. The former Association of Polish Mechanicians from America in Pruszkow manufactures a series of American [redacted] dial types, milling machines. 25X1 They are to be even better than the originals because of the adoption of a system of frontal control of the vertical motion of the saddle carrying the work table that increases rigidity of the machine and eliminates all vibration of the saddles. The following types are made:

a. Horizontal milling machines

| Type | Driving power | Dimensions of table |
|---|---|---|
| 2FX | 5 HP | 320 x 1,300 mm. |
| 3FX | 7.5 HP | 350 x 1,450 mm. |
| 4FX | 10 HP | 500 x 1,600 mm. |

b. Universal milling machine, having the same characteristics as the FX types.

2FW
3FW
4FW

c. Vertical milling machines, with the same characteristics as the FX types.

2FY
3FY
4FY

d. Every type has 16 spindle speeds ranging from 20 to 500 r.p.m. for all sizes "2" and from 18 to 455 r.p.m. for sizes "3" and "4", and 16 different rates of feed for every size. The same types of machines are made with accelerated spindle speeds for size "2" from 20 to 1,500 r.p.m., and for sizes "3" and "4" from 18 to 1,300 r.p.m. Such machines are marked with an additional capital letter "A", that is:

| Horizontal accelerated | Universal accelerated | Vertical accelerated |
|---|---|---|
| 2FXA | 2FWA | 2FYA |
| 3FXA | 3FWA | 3FYA |
| 4FXA | 4FWA | 4FYA |

The accelerated machines have 21 spindle speeds and 32 rates of feed. All the above milling machines can be equipped with universal dividing heads, circular tables, heads for vertical and oblique cutting, etc.

e. Vertical milling machines of a smaller size and more primitive than the above-listed machines are made at the same factory. These machines have 12 spindle speeds ranging from 30 to 700 r.p.m., and 12 rates of feed.

Grinding machines

15. The former State Rifle Factory (Panstwowa Fabryka Karabinow), located in Radom, produces surface grinders, type SPH-1, marked "Lucznik" like some other products of this factory. These machines have a grinding wheel diameter of 200 mm.; table stroke, 600 mm.; a magnetic chuck; and hydraulic feed.

16. The former Krusze Factory, located in Pabjanice, near Lodz, manufactures universal tool grinders, type 1SAB, patterned after the Cincinnati model.

17. The former State Aircraft Factory (Panstwowe Zaklady Lotnicze) in Rzeszow, makes universal tool grinders, type 1SAB, the same as those made by the Krusze Factory; shaft grinders with a maximum grinded diameter (sic) of 110 mm; tap and screw thread die bench grinders (sic).

18. The former John Factory in Lodz makes a shaft grinder with a maximum diameter grinded of 160 mm. This machine is similar to the Naxos-Union type and differs from it only by stageless friction spindle drive instead of the Ward-Leonard set.

19. The former Krusze Factory in Pabjanice manufactures a cutter grinder of the German Munte type, which has two grinding wheels; a hard-alloy tipped cutter grinder, German Elbe-Werke type, which has three grinding wheels, and a drill grinder, German Stock type, which is made in two sizes: up to 13 mm. diameter of drills, and up to 63 mm. diameter of drills.

Planing machines

20. The former Association of Polish Mechanicians from America in Poreba produces planers with two columns, made in three sizes:

a. planing width: 1,000 mm.
planing length: up to 5 m.

b. planing width: 1,250 mm.
planing length: up to 8 m.

c. planing width: 1,600 mm.
planing length: up to 12 m.

21. The former Walden Factory in Wroclaw (Breslau) manufactures a shaper which is made in three sizes: 400 mm. stroke, 600 mm. stroke, 800 mm. stroke.

22. The former Bracia Lubert Factory in Warka produces a bench shaper, 250 mm. stroke.

Gear cutting machines

23. The J. Stalin Plant in Poznan makes the following:

a. Gear shapper, American [redacted] type, in three sizes. 25X1

b. Gear milling machine, German Pfauter type, in three sizes, up to module 8 and maximum pitch diameter 800 mm.

c. Gear lapping machine, German Klingenberg type.

d. Screw cutting machine, up to $2\frac{1}{2}$ inches.

e. Circular saw bench, German Oeler type, 610 mm. diameter of circular saw. Hydraulic feed.